

# Pharmaceutical Preparation Manufacturing: 2002

Issued December 2004

EC02-311-325412 (RV)

## 2002 Economic Census

*Manufacturing*

Industry Series



U S C E N S U S B U R E A U

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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-- Not applicable for this report.

# Introduction to the Economic Census

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## **PURPOSES AND USES OF THE ECONOMIC CENSUS**

The economic census is the major source of facts about the structure and functioning of the nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in "2" and "7."

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the federal government use the data to monitor economic activity and to assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

## **INDUSTRY CLASSIFICATIONS**

Data from the 2002 Economic Census are published primarily according to the 2002 North American Industry Classification System (NAICS). NAICS was first adopted in the United States, Canada, and Mexico in 1997. The 2002 Economic Census covers the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information
52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Food Services
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), largely covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 100 subsectors (three-digit codes), 317 industry groups (four-digit codes), and, as implemented in the United States, 1,179 industries (six-digit codes).

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## **RELATIONSHIP TO HISTORICAL INDUSTRY CLASSIFICATIONS**

Prior to the 1997 Economic Census, data were published according to the Standard Industrial Classification (SIC) system. While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The 1997 Economic Census *Bridge Between NAICS and SIC* demonstrates the relationships between NAICS and SIC industries. Where changes are significant, it may not be possible to construct time series that include data for points both before and after 1997.

Most industry classifications remained unchanged between 1997 and 2002, but NAICS 2002 includes substantial revisions within the construction and wholesale trade sectors, and a number of revisions for the retail trade and information sectors. These changes are noted in industry definitions and will be demonstrated in the *Bridge Between NAICS 2002 and NAICS 1997*.

For 2002, data for enterprise support establishments (those functioning primarily to support the activities of their company's operating establishments, such as a warehouse or a research and development laboratory) are included in the industry that reflects their activities (such as warehousing). For 1997, such establishments were termed auxiliaries and were excluded from industry totals.

## **BASIS OF REPORTING**

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company. (For selected industries, only payroll, employment, and classification are collected for individual establishments, while other data are collected on a consolidated basis.)

## **GEOGRAPHIC AREA CODING**

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for states, metropolitan and micropolitan statistical areas, counties, and corporate municipalities (places) including cities, towns, townships, villages, and boroughs. Respondents were required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from administrative sources is used as a basis for coding.

## **AVAILABILITY OF ADDITIONAL DATA**

All results of the 2002 Economic Census are available on the Census Bureau Internet site ([www.census.gov](http://www.census.gov)) and on digital versatile discs (DVD-ROMs) for sale by the Census Bureau. The American FactFinder system at the Internet site allows selective retrieval and downloading of the data. For more information, including a description of reports being issued, see the Internet site, write to the U.S. Census Bureau, Washington, DC 20233-6100, or call Customer Services at 301-763-4100.

## **HISTORICAL INFORMATION**

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart

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from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some service trades in 1933. Censuses of construction, manufacturing, and the other business censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated, providing comparable census data across economic sectors and using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census report forms.

The range of industries covered in the economic census expanded between 1967 and 2002. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity. New for 2002 is coverage of four industries classified in the agriculture, forestry, and fishing sector under the SIC system: landscape architectural services, landscaping services, veterinary services, and pet care services.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. Reports for 1997 were published primarily on the Internet and copies of 1992 reports are also available there. CD-ROMs issued from the 1987, 1992, and 1997 Economic Censuses contain databases that include all or nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

#### **SOURCES FOR MORE INFORMATION**

More information about the scope, coverage, classification system, data items, and publications for the 2002 Economic Census and related surveys is published in the *Guide to the 2002 Economic Census* at [www.census.gov/econ/census02/guide](http://www.census.gov/econ/census02/guide). More information on the methodology, procedures, and history of the census will be published in the *History of the 2002 Economic Census* at [www.census.gov/econ/www/history.html](http://www.census.gov/econ/www/history.html).



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# Manufacturing

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## SCOPE

The Manufacturing sector (sector 31-33) comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing.

The materials, substances, or components transformed by manufacturing establishments are raw materials that are products of agriculture, forestry, fishing, mining, or quarrying, as well as products of other manufacturing establishments. The materials used may be purchased directly from producers, obtained through customary trade channels, or secured without recourse to the market by transferring the product from one establishment to another, under the same ownership. The new product of a manufacturing establishment may be finished in the sense that it is ready for utilization or consumption, or it may be semifinished to become an input for an establishment engaged in further manufacturing. For example, the product of the alumina refinery is the input used in the primary production of aluminum; primary aluminum is the input to an aluminum wire drawing plant; and aluminum wire is the input for a fabricated wire product manufacturing establishment.

The subsectors in the manufacturing sector generally reflect distinct production processes related to material inputs, production equipment, and employee skills. In the machinery area, where assembling is a key activity, parts and accessories for manufactured products are classified in the industry of the finished manufactured item when they are made for separate sale. For example, a replacement refrigerator door would be classified with refrigerators and an attachment for a piece of metal working machinery would be classified with metal working machinery. However, components, input from other manufacturing establishments, are classified based on the production function of the component manufacturer. For example, electronic components are classified in Subsector 334, Computer and Electronic Product Manufacturing; and stampings are classified in Subsector 332, Fabricated Metal Product Manufacturing.

Manufacturing establishments often perform one or more activities that are classified outside the manufacturing sector of NAICS. For instance, almost all manufacturing has some captive research and development or administrative operations, such as accounting, payroll, or management. These captive services are treated the same as captive manufacturing activities. When the services are provided by separate establishments, they are classified to the NAICS sector where such services are primary, not in manufacturing.

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurry. The establishments in the manufacturing sector are engaged in the transformation of materials into new products. Their output is a new product. However, the definition of what constitutes a new product can be somewhat subjective. As clarification, the following activities are

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considered manufacturing in NAICS: milk bottling and pasteurizing; water bottling and processing; fresh fish packaging (oyster shucking, fish filleting); apparel jobbing (assigning of materials to contract factories or shops for fabrication or other contract operations); as well as contracting on materials owned by others; printing and related activities; ready-mixed concrete production; leather converting; grinding of lenses to prescription; wood preserving; electroplating, plating, metal heat treating, and polishing for the trade; lapidary work for the trade; fabricating signs and advertising displays; rebuilding or remanufacturing machinery (i.e., automotive parts); ship repair and renovation; machine shops; and tire retreading.

**Exclusions.** There are activities that are sometimes considered manufacturing, but for NAICS are classified in another sector. These activities include logging, classified in Sector 11, Agriculture, Forestry, Fishing and Hunting is considered a harvesting operation; the beneficiating of ores and other minerals, classified in Sector 21, Mining, is considered part of the activity of mining; the construction of structures and fabricating operations performed at the site of construction by contractors, is classified in Sector 23, Construction; establishments engaged in breaking of bulk and redistribution in smaller lots, including packaging, repackaging, or bottling products, such as liquors or chemicals; the customized assembly of computers; sorting of scrap; mixing paints to customer order; and cutting metals to customer order, classified in Sector 42, Wholesale Trade or Sector 44-45, Retail Trade, produce a modified version of the same product, not a new product; and publishing and the combined activity of publishing and printing, classified in Sector 51, Information, perform the transformation of information into a product where as the value of the product to the consumer lies in the information content, not in the format in which it is distributed (i.e., the book or software diskette).

The tabulations for this sector do not include central administrative offices, warehouses, or other establishments that serve manufacturing establishments within the same organization. Data for such establishments are classified according to the nature of the service they provide. For example, separate headquarters establishments are reported in NAICS Sector 55, Management of Companies and Enterprises.

The reports described below exclude establishments of firms with no paid employees. These “nonemployers,” typically self-employed individuals or partnerships operating businesses that they have not chosen to incorporate, are reported separately in Nonemployer Statistics. The contribution of nonemployers, relatively small for this sector, may be examined at [www.census.gov/nonemployerimpact](http://www.census.gov/nonemployerimpact).

The reports described below cover all manufacturing establishments with one or more paid employees.

**Definitions.** Industry categories are defined in Appendix B, NAICS Codes, Titles, and Descriptions. Other terms are defined in Appendix A, Explanation of Terms.

## REPORTS

The following reports provide statistics on this sector:

**Industry Series.** There are 473 reports, each covering a single NAICS industry (six-digit code). These reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, capital expenditures, etc. The industry reports also include data for states with 100 employees or more in the industry. The data in industry reports are preliminary and subject to change in the following reports.

**Geographic Area Series.** There are 51 separate reports, one for each state and the District of Columbia. Each state report presents similar statistics at the “all manufacturing” level for each state and its metropolitan and micropolitan areas with 250 employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

### Subject Series:

x Manufacturing

2002 Economic Census

- **Industry-Product Analysis Summary.** This report presents value of shipments, value of product shipments, percentage of product shipments of the total value of shipments, and percentage of distribution of value of product shipments on the NAICS six-digit industry level and by the six- and seven-digit product code levels. It also includes miscellaneous receipts at the six- and seven-digit product code levels by NAICS six-digit industry levels.
- **General Summary.** This report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports, as well as revisions to the data made after the release of the industry and state reports.
- **Product Summary.** This report summarizes the products data published in the industry reports. This report also includes a table with data for products that are primary to more than one industry, which are not in the industry reports.
- **Materials Summary.** This report summarizes the materials data published in the industry reports.
- **Concentration Ratio Summary.** This report publishes data on the percentage of value of shipments and value added accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Herfindahl-Herschmann indexes for each industry.
- **Location of Manufacturing Plants Summary.** This report contains statistics on the number of establishments for the three- and six-digit NAICS industry by state, county, place, and ZIP Code by employment-size of the establishment.

**ZIP Code Statistics.** This report contains statistics on the number of establishments for the three- and six-digit NAICS industry by employment-size of the establishment by ZIP Code.

**Other reports.** Data for this sector are also included in reports with multisector coverage, including Nonemployer Statistics, Comparative Statistics, Bridge Between 2002 NAICS and 1997 NAICS, Business Expenses, and the Survey of Business Owners reports.

## GEOGRAPHIC AREAS COVERED

The level of geographic detail varies by report. Maps are available at [www.census.gov/econ2002maps](http://www.census.gov/econ2002maps). Notes specific to areas in the state are included in Appendix D, Geographic Notes.

1. The United States as a whole.
2. States and the District of Columbia.
3. Metropolitan and micropolitan statistical areas with 250 employees or more. A core based statistical areas (CBSA) contains a core area with a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. CBSAs are differentiated into metropolitan and micropolitan statistical areas based on size criteria. Both metropolitan and micropolitan areas are defined in terms of entire counties, and are listed in Appendix E, Metropolitan and Micropolitan Statistical Areas.
  - a. Metropolitan Statistical Areas (metro areas). Metro areas have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
  - b. Micropolitan Statistical Areas (micro areas). Micro areas have at least one urban cluster of at least 10,000 but less than 50,000 population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
  - c. Metropolitan Divisions (metro divisions). If specified criteria are met, a metro area containing a single core with a population of 2.5 million or more may be subdivided to form smaller groupings of counties referred to as Metropolitan Divisions.

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- d. Combined Statistical Areas (combined areas). If specified criteria are met, adjacent metro and micro areas, in various combinations, may become the components of a new set of areas called Combined Statistical Areas. The areas that combine retain their own designations as metro or micro areas within the larger combined area.
4. Counties and county equivalents defined as of January 1, 2002, with 500 employees or more. Counties are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs, census areas, and city and boroughs. Maryland, Missouri, Nevada, and Virginia have one place or more that is independent of any county organization and constitutes primary divisions of their states. These places are treated as counties and as places.
  5. Economic places with 500 employees or more.
    - a. Municipalities of 2,500 inhabitants or more defined as of January 1, 2002. These are areas of significant population incorporated as cities, boroughs, villages, or towns according to the 2000 Census of Population. For the economic census, boroughs and census areas in Alaska and boroughs in New York are not included in this category.
    - b. Consolidated cities defined as of January 1, 2002. Consolidated cities are consolidated governments that consist of separately incorporated municipalities.
    - c. Townships in Michigan, New Jersey, and Pennsylvania, and towns in New York, Wisconsin, and the six New England states with 10,000 inhabitants or more (according to the 2000 Census of Population).
    - d. Balance of county. Areas outside the entities listed above, including incorporated municipalities with populations of fewer than 2,500, town and townships not qualifying as noted above, and the remainders of counties outside places are categorized as "Balance of county."

## **DOLLAR VALUES**

All dollar values presented are expressed in current dollars; i.e., 2002 data are expressed in 2002 dollars, and 1997 data, in 1997 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

## **COMPARABILITY OF THE 1997 AND 2002 ECONOMIC CENSUSES**

Both the 2002 Economic Census and the 1997 Economic Census present data based on the North American Industry Classification System (NAICS). While there were revisions to selected industries for 2002, this sector is not affected by those revisions.

For 2002, there have been several additional data tables added, which did not exist in 1997. These tables for 2002 include products primary to more than one industry, industry-product analysis, e-commerce value of shipments, and leased and nonleased detail employment statistics by subsectors.

## **RELIABILITY OF DATA**

All data compiled for this sector are subject to nonsampling errors. Nonsampling errors can be attributed to many sources: inability to identify all cases in the actual universe; definition and classification difficulties; differences in the interpretation of questions; errors in recording or coding the data obtained; and other errors of collection, response, coverage, processing, and estimation for missing or misreported data. Selected data in tables titled "Detailed Statistics" are based on the Annual Survey of Manufactures and are subject to sampling errors as well as nonsampling errors.

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No direct measurement of these effects has been obtained except for estimation for missing or misreported data, as by the percentages shown in the tables. Precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors. More information on the reliability of the data is included in Appendix C, Methodology.

## **DISCLOSURE**

In accordance with federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at [www.census.gov/epcd/ec02/disclosure.htm](http://www.census.gov/epcd/ec02/disclosure.htm).

The disclosure analysis for "industry statistics" files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which can be suppressed even though value of shipments data are published.

## **AVAILABILITY OF MORE FREQUENT ECONOMIC DATA**

The Census Bureau conducts the Annual Survey of Manufactures (ASM) in each of the 4 years between the economic censuses. The ASM is a probability-based sample of approximately 55,000 establishments and collects many of the same industry statistics (including employment, payroll, value of shipments, etc.) as the economic census. However, there are selected statistics not included in the ASM. Among these are the number of companies and establishments, detailed product and materials data, and substate geographic data. In addition to the ASM, the Census Bureau conducts the Current Industrial Reports (CIR) program. The CIR program publishes selected detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. The Census Bureau also conducts the monthly Manufacturers' Shipments, Inventories, and Orders (M3) Program, which publishes detailed statistics for manufacturing industries at the U.S. level.

In addition, the County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county, and Statistics of U.S. Businesses provides annual statistics classified by the employment size of the enterprise, further classified by industry for the United States, and by broader categories for states and metropolitan areas.

## **CONTACTS FOR DATA USERS**

Questions about these data may be directed to the U.S. Census Bureau, Manufacturing & Construction Division, Information Services Center, 301-763-4673 or [ask.census.gov](mailto:ask.census.gov).

## **ABBREVIATIONS AND SYMBOLS**

The following abbreviations and symbols are used with these data:

A	Standard error of 100 percent or more
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue
N	Not available or not comparable
S	Withheld because estimates did not meet publication standards
X	Not applicable
Z	Less than half the unit shown
a	0 to 19 employees
b	20 to 99 employees
c	100 to 249 employees

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e	250 to 499 employees
f	500 to 999 employees
g	1,000 to 2,499 employees
h	2,500 to 4,999 employees
i	5,000 to 9,999 employees
j	10,000 to 24,999 employees
k	25,000 to 49,999 employees
l	50,000 to 99,999 employees
m	100,000 employees or more
p	10 to 19 percent estimated
q	20 to 29 percent estimated
r	Revised
s	Sampling error exceeds 40 percent
nsk	Not specified by kind
-	Represents zero (page image/print only)
(CC)	Consolidated city
(IC)	Independent city

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
325412, Pharmaceutical preparation manufacturing .....	2002.. 723	901	182 149	9 941 150	83 233	164 846	3 363 708	83 557 842	30 329 807	113 991 849	4 216 471
	2001.. N	N	167 245	8 699 583	82 766	165 818	3 117 106	71 855 368	29 081 408	100 264 043	4 087 561
	2000.. N	N	159 304	8 322 889	79 664	157 112	2 899 792	62 417 190	26 900 580	88 696 288	3 448 831
	1999.. N	N	145 697	7 878 039	72 773	142 409	2 778 917	59 679 568	24 252 639	83 222 747	2 724 475
	1998.. N	N	117 707	6 085 472	61 622	121 552	2 328 942	53 368 779	22 419 083	75 322 200	2 300 279
	1997.. 707	832	114 119	5 522 283	61 848	124 912	2 131 449	47 864 824	19 480 126	66 734 737	2 491 682

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.



**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)	
	E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)					Wages (\$1,000)
<b>325412, Pharmaceutical preparation manufacturing</b>												
United States .....	2	901	465	182 149	9 941 150	83 233	164 846	3 363 708	83 557 842	30 329 807	113 991 849	4 216 471
Arizona .....	1	16	8	1 017	59 345	560	826	24 790	297 841	90 528	392 504	13 313
California .....	—	136	67	26 113	1 341 235	11 896	20 128	388 726	5 762 963	1 374 460	7 204 836	610 569
Colorado .....	2	14	8	1 281	71 218	777	1 583	34 932	254 793	170 543	442 525	110 525
Connecticut .....	5	12	7	7 819	399 836	1 117	1 989	47 762	2 635 728	466 519	3 091 122	88 988
Florida .....	2	38	18	4 525	216 662	2 168	3 878	63 641	1 086 745	369 799	1 417 494	70 841
Georgia .....	—	13	6	665	32 257	331	777	14 758	101 398	92 074	220 800	29 616
Illinois .....	—	34	16	21 640	1 520 499	6 850	16 369	428 280	5 797 116	1 933 602	7 769 335	502 981
Indiana .....	—	20	13	8 956	476 174	4 666	9 998	187 034	5 696 642	1 818 229	7 515 768	217 082
Iowa .....	3	13	4	284	12 446	140	275	5 200	51 435	32 454	89 570	2 622
Kansas .....	—	11	7	1 575	79 910	901	1 837	36 364	512 139	188 168	691 483	26 109
Massachusetts .....	4	33	14	5 316	320 273	2 181	4 559	112 951	1 748 543	561 860	2 275 658	123 909
Michigan .....	—	19	10	5 652	253 918	3 542	8 120	135 729	2 920 047	643 498	3 552 099	132 347
Minnesota .....	—	14	7	1 129	60 182	566	1 226	22 802	557 614	180 969	728 468	32 297
Missouri .....	1	33	19	4 642	229 968	2 133	4 625	91 084	3 733 353	702 916	4 435 278	133 656
Nebraska .....	—	6	3	1 249	62 299	958	1 879	42 902	634 197	136 534	784 607	20 584
Nevada .....	1	9	3	242	10 530	141	240	4 515	35 852	12 471	48 230	2 173
New Jersey .....	2	99	55	26 295	1 612 126	8 007	17 106	303 607	8 113 786	2 394 543	10 658 847	609 186
New York .....	4	98	59	19 195	962 084	11 094	21 591	419 560	12 763 969	3 647 139	16 152 170	401 154
North Carolina .....	—	30	21	10 430	468 883	6 871	12 482	251 242	11 549 609	2 556 934	14 176 039	368 177
Ohio .....	—	17	10	2 327	121 672	1 606	3 300	75 323	649 100	582 142	1 211 545	49 980
Pennsylvania .....	7	38	22	11 770	766 782	5 082	11 386	292 892	13 203 376	6 641 309	19 769 603	404 770
Tennessee .....	—	10	5	1 908	101 181	1 220	2 324	43 757	1 927 500	780 176	2 725 744	69 446
Texas .....	—	35	14	2 489	110 420	1 883	3 453	81 000	1 202 031	295 490	1 535 038	37 431
Utah .....	3	23	14	2 046	85 994	758	1 468	23 125	400 617	164 055	567 525	19 127
Virginia .....	1	6	3	1 476	53 865	741	1 048	15 399	413 112	120 660	511 613	25 219
Washington .....	2	13	2	398	19 107	179	331	6 141	61 179	18 011	80 544	8 178
Wisconsin .....	5	8	3	317	16 714	166	338	5 990	77 581	59 230	126 236	7 388

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>325412, Pharmaceutical preparation manufacturing</b>	
Companies <sup>1</sup> .....	number.. 723
All establishments <sup>2</sup> .....	number.. 901
Establishments with 1 to 19 employees .....	number.. 436
Establishments with 20 to 99 employees .....	number.. 202
Establishments with 100 employees or more .....	number.. 263
All employees <sup>3</sup> .....	number.. 182 149
Total compensation .....	\$1,000.. 12 492 423
Annual payroll .....	\$1,000.. 9 941 150
Total fringe benefits .....	\$1,000.. 2 551 273
Production workers, average for year .....	number.. 83 233
Production workers on March 12 .....	number.. 81 866
Production workers on May 12 .....	number.. 84 683
Production workers on August 12 .....	number.. 85 741
Production workers on November 12 .....	number.. 80 568
Production worker hours .....	1,000.. 164 846
Production worker wages .....	\$1,000.. 3 363 708
Total cost of materials .....	\$1,000.. 30 329 807
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 26 688 418
Resales .....	\$1,000.. 2 477 239
Purchased fuels .....	\$1,000.. 214 926
Purchased electricity .....	\$1,000.. 403 202
Contract work .....	\$1,000.. 546 022
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 6 732 427
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. D
Total value of shipments .....	\$1,000.. 113 991 849
Primary products value of shipments .....	\$1,000.. 101 952 510
Secondary products value of shipments .....	\$1,000.. 7 110 793
Total miscellaneous receipts .....	\$1,000.. 4 928 546
Value of resales .....	\$1,000.. 3 910 557
Contract receipts .....	\$1,000.. 507 409
Other miscellaneous receipts .....	\$1,000.. 510 580
Primary products specialization ratio .....	percent.. 93
Value of primary products shipments made in all industries .....	\$1,000.. 102 844 617
Value of primary products shipments made in this industry .....	\$1,000.. 101 952 510
Value of primary products shipments made in other industries .....	\$1,000.. 892 107
Coverage ratio .....	percent.. 99
Value added .....	\$1,000.. 83 557 842
Total inventories, beginning of year .....	\$1,000.. 11 831 534
Finished goods inventories .....	\$1,000.. 4 536 368
Work-in-process inventories .....	\$1,000.. 3 233 287
Materials and supplies inventories .....	\$1,000.. 4 061 879
Total inventories, end of year .....	\$1,000.. 12 199 001
Finished goods inventories .....	\$1,000.. 4 082 278
Work-in-process inventories .....	\$1,000.. 3 583 177
Materials and supplies inventories .....	\$1,000.. 4 533 546
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '31 479 872
Total capital expenditures (new and used) .....	\$1,000.. '4 216 471
Buildings and other structures (new and used) .....	\$1,000.. '1 372 202
Machinery and equipment (new and used) .....	\$1,000.. '2 844 269
Automobiles, trucks, etc., for highway use .....	\$1,000.. '97 488
Computers and peripheral data processing equipment .....	\$1,000.. '334 860
All other expenditures for machinery and equipment .....	\$1,000.. '2 411 921
Total retirements .....	\$1,000.. '1 734 959
Gross value of depreciable assets at end of year .....	\$1,000.. '33 961 384
Depreciation charges during year .....	\$1,000.. '2 473 216
Total rental payments .....	\$1,000.. 468 454
Buildings and other structures .....	\$1,000.. 253 755
Machinery and equipment .....	\$1,000.. 214 699
Total other expenses <sup>4</sup> .....	\$1,000.. 8 032 282
Response coverage ratio <sup>5</sup> .....	percent.. 89
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 582 254
Communications services <sup>4</sup> .....	\$1,000.. 122 991
Legal services <sup>4</sup> .....	\$1,000.. 315 542
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 30 512
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 1 580 315
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 213 242
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 102 484
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 1 251 686
Taxes and license fees <sup>4</sup> .....	\$1,000.. 157 948
All other expenses <sup>4</sup> .....	\$1,000.. 3 675 308

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>325412, Pharmaceutical preparation manufacturing</b>											
All establishments .....	2	901	182 149	9 941 150	83 233	164 846	3 363 708	83 557 842	30 329 807	113 991 849	<sup>4</sup> 216 471
Establishments with—											
1 to 4 employees .....	8	228	477	21 138	307	522	10 140	139 419	48 432	187 933	<sup>9</sup> 353
5 to 9 employees .....	6	111	763	38 553	473	909	17 913	240 024	128 015	373 703	<sup>19</sup> 397
10 to 19 employees .....	7	97	1 350	69 666	831	1 633	31 753	387 815	153 563	540 264	<sup>28</sup> 007
20 to 49 employees .....	3	109	3 552	160 093	2 219	4 350	75 885	691 399	282 234	978 494	<sup>36</sup> 269
50 to 99 employees .....	1	93	6 759	277 422	3 947	7 720	124 943	1 806 649	914 844	2 804 655	<sup>177</sup> 290
100 to 249 employees .....	1	114	18 998	877 695	10 943	22 696	399 565	7 359 627	2 406 805	9 811 741	<sup>339</sup> 602
250 to 499 employees .....	—	70	25 046	1 153 364	14 723	30 996	509 701	10 792 137	3 209 194	13 961 454	<sup>561</sup> 785
500 to 999 employees .....	2	48	31 762	1 594 441	18 436	36 678	762 489	25 463 310	9 856 437	35 262 662	<sup>787</sup> 184
1,000 to 2,499 employees .....	1	19	28 766	1 643 152	14 408	27 713	634 393	10 488 810	2 905 645	13 299 557	<sup>757</sup> 920
2,500 employees or more .....	4	12	64 676	4 105 626	16 946	31 629	796 926	26 188 652	10 424 638	36 771 386	<sup>1 499</sup> 664
Administrative records <sup>4</sup> .....	9	314	1 825	92 354	1 188	2 316	44 619	544 252	192 917	731 361	<sup>40</sup> 668

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: <sup>1</sup>–10 to 19 percent; <sup>2</sup>–20 to 29 percent; <sup>3</sup>–30 to 39 percent; <sup>4</sup>–40 to 49 percent; <sup>5</sup>–50 to 59 percent; <sup>6</sup>–60 to 69 percent; <sup>7</sup>–70 to 79 percent; <sup>8</sup>–80 to 89 percent; <sup>9</sup>–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
325412	Pharmaceutical preparation manufacturing .....	901	182 149	9 941 150	83 233	164 846	3 363 708	83 557 842	30 329 807	113 991 849	'4 216 471
3254121	Pharmaceutical preparations, affecting neoplasms, the endocrine system, and metabolic diseases, for human use .....	54	19 435	1 133 527	9 384	18 468	430 138	12 841 068	2 270 273	15 089 611	'694 554
3254124	Pharmaceutical preparations, acting on the central nervous system and the sense organs, for human use ..	90	39 129	2 092 540	19 117	38 110	709 436	18 945 835	9 891 741	29 112 636	'1 057 980
3254127	Pharmaceutical preparations, acting on the cardiovascular system, for human use .....	31	9 165	475 152	5 127	10 500	220 124	8 199 965	2 374 738	10 288 170	'286 203
325412A	Pharmaceutical preparations, acting on the respiratory system, for human use .....	34	13 694	687 459	5 503	10 801	190 692	8 455 260	1 279 415	9 665 214	'189 241
325412D	Pharmaceutical preparations, acting on the digestive or the genitourinary systems, for human use ...	43	21 509	1 370 692	7 498	15 332	342 619	13 266 114	6 787 046	20 054 687	'654 120
325412G	Pharmaceutical preparations, acting on skin, for human use .....	30	7 580	465 046	2 586	5 111	94 315	2 856 342	749 262	3 728 349	'82 602
325412L	Pharmaceutical preparations, vitamin, nutrient, and hematinic preparations, for human use .....	114	21 952	784 655	13 964	22 872	382 160	3 072 929	2 179 483	5 333 252	'205 056
325412P	Pharmaceutical preparations, affecting parasitic and infective diseases, for human use (excluding diagnostics) .....	37	35 947	2 246 378	12 707	27 693	696 267	11 917 605	3 176 011	15 080 065	'802 328
325412T	Pharmaceutical preparations for veterinary use (including medicinal premixes and medicated pet care products; excluding pet flea and tick products), excluding diagnostics .....	43	5 556	290 834	3 224	6 896	148 277	1 619 666	763 992	2 458 586	'103 051
325412V	In vivo diagnostic substances .....	20	2 864	148 557	1 172	2 424	42 559	1 459 388	519 124	1 976 686	'66 955

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
325412	Pharmaceutical preparation manufacturing .....	2002.. N 1997.. N	X X	X X	102 844 617 59 215 525
3254121	Pharmaceutical preparations, affecting neoplasms, the endocrine system, and metabolic diseases, for human use .....	2002.. N 1997.. N	X X	X X	17 539 462 4 821 511
32541211	Pharmaceutical preparations, affecting neoplasms, the endocrine system, and metabolic diseases, for human use .....	2002.. N 1997.. N	X X	X X	17 539 462 4 821 511
3254121100	Pharmaceutical preparations, affecting neoplasms, the endocrine system, and metabolic diseases, for human use <sup>1</sup> .....	2002.. 95 1997.. 68	X X	X X	17 539 462 4 821 511
3254124	Pharmaceutical preparations, acting on the central nervous system and the sense organs, for human use .....	2002.. N 1997.. N	X X	X X	24 005 608 11 808 739
32541241	Pharmaceutical preparations, acting on the central nervous system and the sense organs, for human use .....	2002.. N 1997.. N	X X	X X	24 005 608 11 808 739
3254124100	Pharmaceutical preparations, acting on the central nervous system and the sense organs, for human use <sup>1</sup> .....	2002.. 117 1997.. 110	X X	X X	24 005 608 11 808 739
3254127	Pharmaceutical preparations, acting on the cardiovascular system, for human use .....	2002.. N 1997.. N	X X	X X	10 503 877 8 656 088
32541271	Pharmaceutical preparations, acting on the cardiovascular system, for human use .....	2002.. N 1997.. N	X X	X X	10 503 877 8 656 088
3254127100	Pharmaceutical preparations, acting on the cardiovascular system, for human use <sup>1</sup> .....	2002.. 65 1997.. 65	X X	X X	10 503 877 8 656 088
325412A	Pharmaceutical preparations, acting on the respiratory system, for human use .....	2002.. N 1997.. N	X X	X X	12 559 042 5 742 303
325412A1	Pharmaceutical preparations, acting on the respiratory system, for human use .....	2002.. N 1997.. N	X X	X X	12 559 042 5 742 303
325412A100	Pharmaceutical preparations, acting on the respiratory system, for human use <sup>1</sup> .....	2002.. 85 1997.. 92	X X	X X	12 559 042 5 742 303
325412D	Pharmaceutical preparations, acting on the digestive or the genito-urinary systems, for human use .....	2002.. N 1997.. N	X X	X X	13 100 774 9 360 623
325412D1	Pharmaceutical preparations, acting on the digestive or the genito-urinary systems, for human use .....	2002.. N 1997.. N	X X	X X	13 100 774 9 360 623
325412D100	Pharmaceutical preparations, acting on the digestive or the genito-urinary systems, for human use <sup>1</sup> .....	2002.. 116 1997.. 101	X X	X X	13 100 774 9 360 623
325412G	Pharmaceutical preparations, acting on skin, for human use .....	2002.. N 1997.. N	X X	X X	2 926 684 1 800 841
325412G1	Pharmaceutical preparations, acting on skin, for human use .....	2002.. N 1997.. N	X X	X X	2 926 684 1 800 841
325412G100	Pharmaceutical preparations, acting on skin, for human use <sup>1</sup> .....	2002.. 107 1997.. 90	X X	X X	2 926 684 1 800 841
325412L	Pharmaceutical preparations, vitamin, nutrient, and hematinic preparations, for human use .....	2002.. N 1997.. N	X X	X X	6 055 682 5 209 752
325412L1	Pharmaceutical preparations, vitamin, nutrient, and hematinic preparations, for human use .....	2002.. N 1997.. N	X X	X X	6 055 682 5 209 752
325412L100	Pharmaceutical preparations, vitamin, nutrient, and hematinic preparations, for human use <sup>1</sup> .....	2002.. 144 1997.. 127	X X	X X	6 055 682 5 209 752
325412P	Pharmaceutical preparations, affecting parasitic and infective diseases, for human use (excluding diagnostics) .....	2002.. N 1997.. N	X X	X X	11 347 130 7 651 310
325412P1	Pharmaceutical preparations, affecting parasitic and infective diseases, for human use (excluding diagnostics) .....	2002.. N 1997.. N	X X	X X	11 347 130 7 651 310
325412P100	Pharmaceutical preparations, affecting parasitic and infective diseases, for human use (excluding diagnostics) <sup>1</sup> .....	2002.. 74 1997.. 73	X X	X X	11 347 130 7 651 310
325412T	Pharmaceutical preparations for veterinary use (including medicinal premixes and medicated pet care products; excluding pet flea and tick products), excluding diagnostics .....	2002.. N 1997.. N	X X	X X	2 399 576 1 593 352
325412T1	Pharmaceutical preparations for veterinary use (including medicinal premixes and medicated pet care products; excluding pet flea and tick products), excluding diagnostics .....	2002.. N 1997.. N	X X	X X	2 399 576 1 593 352
325412T100	Pharmaceutical preparations for veterinary use (including medicinal premixes and medicated pet care products; excluding pet flea and tick products), excluding diagnostics <sup>1</sup> .....	2002.. 79 1997.. 78	X X	X X	2 399 576 1 593 352
325412V	In vivo diagnostic substances .....	2002.. N 1997.. N	X X	X X	1 440 590 1 070 479
325412V1	In vivo diagnostic substances .....	2002.. N 1997.. N	X X	X X	1 437 295 1 069 281
325412V111	In vivo diagnostic substances, contrast media products (both iodinated and barium products), including angiographic agents .....	2002.. 5	X	X	D

See footnotes at end of table.

**Table 6a. Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
325412	Pharmaceutical preparation manufacturing—Con.				
325412V	In vivo diagnostic substances—Con.				
325412V1	In vivo diagnostic substances—Con.				
325412V111	In vivo diagnostic substances, contrast media products (both iodinated and barium products), including angiourographic agents—Con.	1997.. 7	X	X	540 907
325412V121	In vivo diagnostic substances, radioactive reagents (both diagnostic and therapeutic) .....	2002.. 13	X	X	D
		1997.. 9	X	X	465 980
325412V191	In vivo diagnostic substances, other .....	2002.. 10	X	X	171 222
		1997.. 14	X	X	62 394
325412VY	In vivo diagnostic substances, nsk .....	2002.. N	X	X	3 295
		1997.. N	X	X	1 198
325412VYWV	In vivo diagnostic substances, nsk .....	2002.. N	X	X	3 295
		1997.. N	X	X	1 198
325412W	Pharmaceutical preparation manufacturing, nsk, total .....	2002.. N	X	X	966 192
		1997.. N	X	X	1 500 527
325412WY	Pharmaceutical preparation manufacturing, nsk, total .....	2002.. N	X	X	966 192
		1997.. N	X	X	1 500 527
325412WYWW	Pharmaceutical preparation manufacturing, nsk, for nonadministrative-record establishments .....	2002.. N	X	X	486 371
		1997.. N	X	X	1 173 034
325412WYWY	Pharmaceutical preparation manufacturing, nsk, for administrative-record establishments .....	2002.. N	X	X	479 821
		1997.. N	X	X	327 493

<sup>1</sup>For additional detail, see Current Industrial Report MA325G, Pharmaceutical Preparations.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3254121	Pharmaceutical preparations, affecting neoplasms, the endocrine system, and metabolic diseases, for human use	
	United States .....	2002.. 17 539 462
	California .....	1997.. 4 821 511
	Florida .....	2002.. 2 438 712
	New Jersey .....	1997.. N
	New York .....	2002.. 186 342
	New York .....	1997.. 24 842
3254124	Pharmaceutical preparations, acting on the central nervous system and the sense organs, for human use	
	United States .....	2002.. 24 005 608
	California .....	1997.. 11 808 739
	Colorado .....	2002.. 909 608
	Florida .....	1997.. 530 960
	Illinois .....	2002.. 131 131
	Minnesota .....	1997.. N
	New Jersey .....	2002.. 300 158
	New York .....	1997.. 87 834
	North Carolina .....	2002.. 886 424
	Ohio .....	1997.. 851 193
	Pennsylvania .....	2002.. 57 601
	Utah .....	1997.. N
	Utah .....	2002.. 1 774 589
	Utah .....	1997.. 1 489 231
3254127	Pharmaceutical preparations, acting on the cardiovascular system, for human use	
	United States .....	2002.. 10 503 877
	California .....	1997.. 8 656 088
	Florida .....	2002.. 567 592
	Illinois .....	1997.. 486 972
	Indiana .....	2002.. 84 304
	Missouri .....	1997.. N
	New Jersey .....	2002.. 105 199
	New York .....	1997.. 336 673
	Ohio .....	2002.. 462 463
	Ohio .....	1997.. N
	Ohio .....	2002.. 77 661
	Ohio .....	1997.. N
	Ohio .....	2002.. 768 794
	Ohio .....	1997.. 1 298 598
325412A	Pharmaceutical preparations, acting on the respiratory system, for human use	
	United States .....	2002.. 12 559 042
	California .....	1997.. 5 742 303
	Illinois .....	2002.. 626 768
	New Jersey .....	1997.. 379 962
	New York .....	2002.. 201 684
	North Carolina .....	1997.. 164 506
	Pennsylvania .....	2002.. 734 880
	Texas .....	1997.. N
	Texas .....	2002.. 1 526 518
	Texas .....	1997.. 374 331
325412D	Pharmaceutical preparations, acting on the digestive or the genito-urinary systems, for human use	
	United States .....	2002.. 13 100 774
	California .....	1997.. 9 360 623
	Florida .....	2002.. 56 905
	Massachusetts .....	1997.. 148 306
	Michigan .....	2002.. 63 735
	Missouri .....	1997.. 79 199
	New Jersey .....	2002.. 19 464
	New York .....	1997.. N
	North Carolina .....	2002.. 458 084
	Ohio .....	1997.. N
	Tennessee .....	2002.. 299 212
	Tennessee .....	1997.. N
	Tennessee .....	2002.. 911 633
Tennessee .....	1997.. 232 649	
Tennessee .....	2002.. 719 369	
Tennessee .....	1997.. 345 099	
Tennessee .....	2002.. 2 862 835	
Tennessee .....	1997.. N	
Tennessee .....	2002.. 36 484	
Tennessee .....	1997.. 75 397	
Tennessee .....	2002.. 29 551	
Tennessee .....	1997.. N	

See footnotes at end of table.

Table 6b. **Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
325412D	Pharmaceutical preparations, acting on the digestive or the genito-urinary systems, for human use—Con.	
	United States—Con.	
	Texas .....	2002.. 25 122
	Virginia .....	1997.. N
	Virginia .....	2002.. 102 420
	Virginia .....	1997.. 100 799
325412G	Pharmaceutical preparations, acting on skin, for human use	
	United States .....	2002.. 2 926 684
	United States .....	1997.. 1 800 841
	California .....	2002.. 137 123
	California .....	1997.. 123 414
	Connecticut .....	2002.. 63 905
	Connecticut .....	1997.. 43 332
	Florida .....	2002.. 35 663
	Florida .....	1997.. 19 575
	Illinois .....	2002.. 120 290
	Illinois .....	1997.. N
	Michigan .....	2002.. 20 820
	Michigan .....	1997.. 38 019
	New Jersey .....	2002.. 509 165
	New Jersey .....	1997.. 485 621
	New York .....	2002.. 726 691
	New York .....	1997.. 276 417
	Tennessee .....	2002.. 232 270
	Tennessee .....	1997.. N
325412L	Pharmaceutical preparations, vitamin, nutrient, and hematinic preparations, for human use	
	United States .....	2002.. 6 055 682
	United States .....	1997.. 5 209 752
	Arizona .....	2002.. 49 646
	Arizona .....	1997.. 120 630
	California .....	2002.. 1 052 455
	California .....	1997.. 1 762 491
	Colorado .....	2002.. 18 839
	Colorado .....	1997.. N
	Florida .....	2002.. 22 388
	Florida .....	1997.. N
	Indiana .....	2002.. 49 661
	Indiana .....	1997.. N
	Massachusetts .....	2002.. 49 112
	Massachusetts .....	1997.. 55 444
	New Jersey .....	2002.. 347 320
	New Jersey .....	1997.. 315 603
	New York .....	2002.. 1 433 578
	New York .....	1997.. 739 574
	North Carolina .....	2002.. 533 496
	North Carolina .....	1997.. 217 752
	Pennsylvania .....	2002.. 57 094
	Pennsylvania .....	1997.. 22 161
	Texas .....	2002.. 164 054
	Texas .....	1997.. N
	Utah .....	2002.. 306 403
	Utah .....	1997.. 314 441
	Washington .....	2002.. 20 642
	Washington .....	1997.. N
325412P	Pharmaceutical preparations, affecting parasitic and inefective diseases, for human use (excluding diagnostics)	
	United States .....	2002.. 11 347 130
	United States .....	1997.. 7 651 310
	California .....	2002.. 404 487
	California .....	1997.. 31 756
	Florida .....	2002.. 82 910
	Florida .....	1997.. 74 104
	Illinois .....	2002.. 1 215 454
	Illinois .....	1997.. N
	Indiana .....	2002.. 520 747
	Indiana .....	1997.. N
	New Jersey .....	2002.. 2 081 027
	New Jersey .....	1997.. 1 555 738
	New York .....	2002.. 1 120 559
	New York .....	1997.. 344 172
	Pennsylvania .....	2002.. 1 614 847
	Pennsylvania .....	1997.. 1 003 829
325412T	Pharmaceutical preparations for veterinary use (including medicinal premixes and medicated pet care products; excluding pet flea and tick products), excluding diagnostics	
	United States .....	2002.. 2 399 576
	United States .....	1997.. 1 593 352
	California .....	2002.. 283 997
	California .....	1997.. 33 297
	Illinois .....	2002.. 122 516
	Illinois .....	1997.. 30 097
	Iowa .....	2002.. 129 268
	Iowa .....	1997.. 178 447
	Kansas .....	2002.. 235 931
	Kansas .....	1997.. 148 801
	Missouri .....	2002.. 370 317
	Missouri .....	1997.. 223 340
	New Jersey .....	2002.. 178 200
	New Jersey .....	1997.. 108 955
	New York .....	2002.. 75 313
	New York .....	1997.. 53 250

See footnotes at end of table.



**Table 6b. Product Class Shipments for Selected States: 2002 and 1997—Con.**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
325412V	In vivo diagnostic substances	
	United States.....	2002.. 1 440 590
		1997.. 1 070 479
	California .....	2002.. 14 256
		1997.. 25 988
	New York .....	2002.. 86 923
		1997.. N

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
325412	Pharmaceutical preparation manufacturing		
00900001	Total materials .....	X	26 688 418
	.....2002..	X	15 102 149
	.....1997..	X	1 549 812
32541113	Antibiotics (bulk), for human and veterinary use .....	X	2 855 535
	.....2002..	X	26 050
	.....1997..	X	96 987
32541101	Vitamins, natural and synthetic, for human and veterinary use (bulk) .....	X	1 283 279
	.....2002..	X	1 115 425
	.....1997..	X	132 656
32541103	Vitamins, natural and synthetic, for animal feeds (bulk) .....	X	D
	.....2002..	X	D
	.....1997..	X	99 093
11100033	Agricultural products, crude (including flowers, grains, seeds, herbs, etc.) .....	X	
	.....2002..	X	
	.....1997..	X	
31100001	Processed food and kindred products (including lactose, meat packing plant products, yeast, etc.) .....	X	113 294
	.....2002..	X	95 024
	.....1997..	X	D
32541000	Blood derivatives and extenders .....	X	D
	.....2002..	X	D
	.....1997..	X	D
32541107	All other bulk medicinal and botanical uncompounded drugs (excluding antibiotics and vitamins) .....	X	11 314 072
	.....2002..	X	5 139 065
	.....1997..	X	
32599807	Gelatin (pharmaceutical grade) and gelatin capsules .....	X	189 246
	.....2002..	X	88 846
	.....1997..	X	220 968
325000C2	Industrial inorganic chemicals (salts of sodium, calcium, etc.), excluding medicinals .....	X	N
	.....2002..	X	N
	.....1997..	X	N
32510036	Alcohols, excluding ethyl (100 percent basis) .....	X	142 661
	.....2002..	X	N
	.....1997..	X	
32519201	Cyclic crudes and intermediates (including organic colors) .....	X	234 770
	.....2002..	X	274 476
	.....1997..	X	4 003 890
32510031	Other synthetic organic chemicals (including halogenated hydrocarbons) .....	X	415 437
	.....2002..	X	
	.....1997..	X	
32610015	Fabricated plastics products, including plastics closures, film, and packaging items (excluding containers) .....	X	461 939
	.....2002..	X	307 792
	.....1997..	X	
33211500	Metal closures and crowns for containers .....	X	19 959
	.....2002..	X	46 774
	.....1997..	X	308 093
32310003	Labels, coupons, instructions, and other printed material .....	X	389 491
	.....2002..	X	410 720
	.....1997..	X	520 573
32610029	Plastics containers .....	X	
	.....2002..	X	
	.....1997..	X	
32721301	Glass containers .....	X	121 061
	.....2002..	X	201 919
	.....1997..	X	58 154
33240000	Metal containers .....	X	52 533
	.....2002..	X	413 696
	.....1997..	X	618 969
32221001	Paperboard containers, boxes, and corrugated paperboard .....	X	
	.....2002..	X	
	.....1997..	X	
00970099	All other materials and components, parts, containers, and supplies .....	X	3 394 542
	.....2002..	X	2 026 023
	.....1997..	X	2 120 630
00971000	Materials, ingredients, containers, and supplies, nsk .....	X	756 432
	.....2002..	X	
	.....1997..	X	

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

# Appendix A.

## Explanation of Terms

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### **BEGINNING- AND END-OF-YEAR INVENTORIES**

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and, then, to report the LIFO reserve and the LIFO value after adjustment for the reserve.

### **Inventory data by stage of fabrication**

Total inventories and three detailed components (1)finished goods, (2)work-in-process, and (3)materials, supplies, fuels, etc., were collected.

When using inventory data by stage of fabrication for “all industries” and at the three-digit subsector level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by an establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for all publication levels.

### **COST OF MATERIALS**

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

Included in this item are:

1. Cost of parts, components, containers, etc. Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
2. Cost of products bought and sold in the same condition.
3. Cost of fuels consumed for heat and power. Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. Cost of purchased electricity. The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
5. Cost of contract work. This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term “Contract Work” refers to the fee a company pays to another company to perform a service.

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## **Specific materials consumed**

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials that were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials" Census material code 00970099.

Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind" Census materials code 00971000.

## **Duplication in cost of materials and value of shipment**

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries.

Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

## **SELECTED PURCHASED SERVICES**

Annual Survey of Manufactures (ASM) establishments were requested to provide information on the cost of selected purchased services for the repair and maintenance services of buildings and/or machinery; communication services; legal services; accounting, auditing, and bookkeeping services; advertising and promotional services; expensed computer hardware and supplies and purchased computer services; refuse removal services; management consulting and administrative services; taxes and license fees; and all other expenses not previously stated. Each of these items reflects the costs paid directly by the establishment and excludes salaries paid to employees of the establishment for these services. These expenses are normally considered as nonproduction related costs purchased from other companies.

Included in the cost of selected purchased services for the repair and maintenance services of buildings and/or machinery are payments made for all maintenance and repair work on buildings and equipment. Payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Excluded from this item are extensive repairs or reconstruction that was capitalized, which is considered capital expenditures; costs incurred directly by the establishment in using its own work force to perform repairs and maintenance work; and repairs and maintenance provided by the building or machinery owner as part of the rental contract.

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Included in the cost of selected purchased services for communication is the actual expense incurred or payable during the year for any type of communication. Such types of communication include telephone, data transmission, telegraph, Internet, connectivity, FAX, telex, photo transmission, paging, cellular telephone, on-line access and related services, etc.

Included in the cost of selected purchased services for legal services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of the establishment for these services.

Included in the cost of selected accounting, auditing, and bookkeeping services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected advertising and promotional services are payments made to other companies for these services that were paid directly by the establishment. These include payments for printing, media coverage, and other services and materials. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected expensed computer hardware and supplies and purchased computer services are actual expenses incurred or payable during the year for this item. Purchases for computer hardware and supplies, computer services (software, data transmission, processing services, Web design, etc.) are all included. Excluded are services provided by other establishments of the same company (such as a separate central data processing unit).

Included in the cost of selected purchased refuse removal services are payments made to other companies for these services that were paid directly by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures and the salaries paid to employees of the establishment for these services.

Included in the cost of selected purchased management consulting and administrative services are payments made to other companies for these services that were paid directly by the establishment. Excluded are the salaries paid to employees of this establishment for these services.

Included in the cost of selected purchased taxes and license fees are payments made to other companies for these services that were paid directly by the establishment, excluding income, sales, payroll, and excise taxes. Excluded are also the salaries paid to employees of this establishment for these services.

### **Response coverage ratio**

A response coverage ratio is a measure of the extent to which respondents report for an item. The estimate is made by calculating the ratio value of the weighted total employment data for all the ASM establishments that report the item to the weighted total employment data for all ASM establishments classified in an industry (reporters and nonreporters).

### **DEPRECIATION CHARGES FOR FIXED ASSETS**

This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

### **NUMBER OF EMPLOYEES**

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period that included the 12th of the months specified on the report form. Included are employees on paid sick leave, paid holidays, and paid vacations; not included are proprietors and partners of unincorporated businesses.

These individuals comprise of all full-time and part-time employees who are on the payrolls of establishments who worked or received pay for any part of the pay period including the 12th of March, May, August, and November.

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The “all employees” number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November

### **Production Workers**

The “production workers” number includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant’s own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

### **All Other Employees**

The “other employees” covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It includes sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force.

### **TOTAL FRINGE BENEFITS**

This item is the employer’s costs for social security tax, unemployment tax, workmen’s compensation insurance, state disability insurance pension plans, stock purchase plans, union-negotiated benefits, life insurance premiums, and insurance premiums on hospital and medical plans for employees.

Fringe benefits are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of federal old age and survivors’ insurance, unemployment compensation, and workers’ compensation. Payments for voluntary programs include all programs not specifically required by legislation, whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

### **GROSS VALUE OF DEPRECIABLE ASSETS (ACQUISITION COSTS) AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)**

Total value of depreciable assets is collected on all census forms.

It shows the value of depreciable assets for the beginning of year (BOY) and end of year (EOY). The data encompass all fixed depreciable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year.

Accordingly, the value of assets at the end of the year includes the value of construction in progress.

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In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

## **ESTABLISHMENT**

An establishment is a single physical location where business is conducted or where services or industrial operations are performed. Data in this sector includes those establishments where manufacturing is performed. A separate report was required for each manufacturing establishment (plant) with one employee or more that were in operation at any time during the year.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

## **Company**

A company or ("enterprise") is comprised of all the establishments that operate under the ownership or control of a single organization. A company may be a business, service, or membership organization; consist of one or several establishments; and operate at one or several locations. It includes all subsidiary organizations, all establishments that are majority-owned by the company or any subsidiary, and all the establishments that can be directed or managed by the company or any subsidiary.

A company may have one or many establishments. Examples include product and service sales offices (retail and wholesale), industrial production plants, processing or assembly operations, mines or well sites, and support operations (such as an administrative office, warehouse, customer service center, or regional headquarters). Each establishment should receive, complete, and return a separate census form.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

## **PAYROLL**

This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' total supplemental labor costs (those required by federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

## **PRODUCT CODES AND CLASSES OF PRODUCTS**

NAICS United States industries are identified by a six-digit code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits.

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As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. Since the 1997 census programs, information is collected on the output of almost 10,000 individual product items.

In the manufacturing sector for 2002, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are 1,450 product classes (seven-digit codes), 5,674 census products, and an additional 3,746 ten-digit product codes. The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives.

Comparability with previous figures was given considerable weight in the selection of product categories, so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant (quantity produced and consumed) was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

### **PRODUCTION-WORKER HOURS**

This item covers all hours worked or paid for at the manufacturing plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the establishment.

### **QUANTITY OF ELECTRICITY PURCHASED FOR HEAT AND POWER**

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the Annual Survey of Manufactures (ASM) form. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

### **RENTAL PAYMENTS**

Total rental payments are collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained, if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments.



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However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

### **RETIREMENTS OF DEPRECIABLE ASSETS**

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

### **CAPITAL EXPENDITURES FOR NEW AND USED PLANT AND EQUIPMENT**

Represents the total new and used capital expenditures reported by establishments in operation and any known plants under construction.

These data include expenditures for:

1. Permanent additions and major alterations to manufacturing and mining establishments.
2. New and used machinery and equipment used for replacement and additions to plant capacity, if they are of the type for which depreciation, depletion, or (for mining establishments) Office of Minerals Exploration accounts are ordinarily maintained. In addition, for mining establishments, these data include expenditures made during the year for development and exploration of mineral properties. For manufacturing establishments, these data are broken down into three types.
  - a. Automobiles, trucks, etc. for highway use. These include vehicles acquired under a lease-purchase agreement and excludes vehicles leased or normally designed to transport materials, property, or equipment on mining, construction, petroleum development, and similar projects. These vehicles are of such size or weight as to be normally restricted by state laws or regulations from operating on public highways. It also excludes purchases of vehicles that are purchased by a company for highway use.
  - b. Computers and peripheral data processing equipment. This item include all purchases of computers and related equipment.
  - c. All other expenditures for machinery and equipment excluding automobiles and computer equipment.

Capital expenditures include work done by contract, as well as by the establishment's own workforce.

These data exclude expenditures for land and mineral rights and cost of maintenance and repairs charged as current operating expenses.

### **VALUE ADDED**

This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning- and end-of-year inventories.

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For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

“Value added” avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

### **VALUE OF SHIPMENTS**

This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all items made by or for the establishments from material owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for NAICS defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of product shipments: Reported contract work — receipts for work or services that a plant performed for others on their materials. Value of resales — sales of products brought and sold without further manufacture, processing, or assembly. Other miscellaneous receipts — such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. These components are: Primary products value of shipments. Secondary product value of shipments. Total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio. The term “Value of primary products shipments made in this industry” is used in this publication and refers to the same data.

### **Duplication in cost of materials and value of shipment**

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since, the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries.

Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

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Before 1962, cost of materials and value of shipments were not published for some industries that included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

### **Specialization and coverage ratio**

These items are not collected on the report forms, but are derived from the data shown in Table 3. An establishment is classified in a particular industry, if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.).

Specialization and coverage ratio have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in Tables 1 through 5 and data on product shipments shown in Tables 6a and 6b.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

## Appendix B.

# NAICS Codes, Titles, and Descriptions

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### **325412 PHARMACEUTICAL PREPARATION MANUFACTURING**

This U.S. industry comprises establishments primarily engaged in manufacturing in-vivo diagnostic substances and pharmaceutical preparations (except biological) intended for internal and external consumption in dose forms, such as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

# Appendix C.

## Methodology

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### SOURCES OF THE DATA

The manufacturing sector includes approximately 350,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing. The amount of information requested from manufacturing establishments was dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the Annual Survey of Manufactures (ASM).

Establishments in the 2002 Economic Census are divided into those sent report forms and those not sent report forms. The coverage of and the method of obtaining census information from each are described below:

1. Establishments sent a report form:

- a. ASM sample establishments. This group accounts for approximately 15 percent of all manufacturing establishments. The ASM panel covers all the units of large manufacturing establishments, as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size. For more information, see the Description of the ASM Survey Sample.

In an economic census year, the ASM report form (MA-10000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply additional information on gross book value of assets and capital expenditures. ASM establishments were also requested to provide information on retirements, depreciation, rental payments, and supplemental labor costs. For establishments not included in the ASM, these additional items were estimated using relationships observed in the ASM establishment data. The census statistics for these variables are a sum of the ASM establishment data and the estimated data for non-ASM establishments. ASM establishments were also requested to provide information for selected purchased services. The census statistics for the purchased service items were derived solely from the ASM establishments. See Appendix A. Explanation of Terms, for an explanation of these items. The census part of the report form is 1 of 220 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of this many forms to canvass the 473 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries, as well as secondary products and miscellaneous services that establishments classified in these industries were likely to perform. Respondents were requested to identify the products, the value of each product, and, in certain cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry, which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided

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for the respondent to describe significant materials not listed on the form.

A wide variety of special inquiries were included to measure activities peculiar to a given industry, such as operations performed and equipment used.

- b. Large and medium establishments (non-ASM). Approximately 30 percent of all manufacturing establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 220 economic census — manufacturing regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.
- c. Small single-establishment companies (non-ASM). This group includes approximately 15 percent of all manufacturing establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated “short form” was used. These establishments received 1 of the 31 versions of the short form, which requested summary product and material data and totals but no details on employment, payroll, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics, because the same data were collected on the short form as on the long form. However, detailed information on products and materials consumed was not collected on the short form; thus, its use would increase the value of the “not specified by kind” (nsk) categories.

## 2. Establishments not sent a report form:

- a. Small single-establishment companies not sent a report form. Approximately 40 percent of the manufacturing establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and the Census Bureau’s ability to assign the correct six-digit NAICS industry classification to the establishment. For each six-digit NAICS industry code, an annual payroll cutoff was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report that requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these establishments, but were included in the product and material “not specified by kind” (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes the administrative-record cases had only two- or three-digit NAICS group classification codes available in the files. For manufacturing, these establishments were sent a

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separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as “All other” industries within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics, other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

- b. All nonemployers, i.e., all firms subject to federal income tax, with no paid employees, during 2002 are excluded as in previous censuses. Data for nonemployers are not included in this report, but are released in the annual *Nonemployer Statistics* series.

The report forms used to collect information for establishments in this sector are available at [help.econ.census.gov/econhelp/resources/](http://help.econ.census.gov/econhelp/resources/).

A more detailed examination of census methodology is presented in the *History of the Economic Census* at [www.census.gov/econ/www/history.html](http://www.census.gov/econ/www/history.html).

## **INDUSTRY CLASSIFICATION OF ESTABLISHMENTS**

The classifications for all establishments covered in the 2002 Economic Census — Manufacturing are classified in 1 of 473 industries in accordance with the industry definitions in the *North American Industry Classification System (NAICS), United States, 2002* manual. There were no changes between the 2002 edition and the 1997 edition affecting this sector. When applicable, Appendix F of this report shows the product class and product comparability between the two systems for data in this report.

In the NAICS system, an industry is generally defined as a group of establishments that have similar production processes. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the manufacturing sector for 2002, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. There are 1,450 product classes (seven-digit codes), 5,674 census products, and an additional 3,746 ten-digit product codes. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 2002 Economic Census — Manufacturing, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value. For 2002, there were no “resistance rules” or “frozen industries.”

In ASM years, establishments included in the ASM sample with certainty weights are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year. However, in the following census year, these ASM plants are allowed to shift from one industry to another.

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The results of these rules covering the switching of plants from one industry classification to another are that some industries comprise different mixes of establishments in different survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the six-digit NAICS level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by manufacture, value of shipments, etc.) reflect the activities of the establishments that may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics, especially the value of shipments, to the product statistics, the composition of the industry's output should be considered.

The extent to which industry and product statistics may be matched with each other is measured by the primary product specialization ratio and the coverage ratio. The primary product specialization ratio is the proportion of industry shipments accounted for by the primary products of establishments classified in the industry. The coverage ratio is the proportion of product shipments accounted for by establishments classified in the industry.

#### **ESTABLISHMENT BASIS OF REPORTING**

The 2002 Economic Census — Manufacturing is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location or establishment. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports, if the plant records permit such a separation and if the activities are substantial in size.

In 2002, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures, except for data on number of establishments for a few industries.

The 2002 Economic Census — Manufacturing excludes data for central administrative offices (CAOs). These would include separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company. These data are published in a separate report series.

#### **DESCRIPTION OF THE ASM SURVEY SAMPLE**

The ASM sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1999 survey year based on the 1997 Economic Census — Manufacturing. This sample will be in place through the 2003 ASM.

In 1997, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the establishments in the 1997 manufacturing population were partitioned into two components for developing estimates within the ASM. The details of each are described below:

1. Mail stratum. The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies



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that operate at more than one physical location). Approximately 200,000 of the 370,000 establishments in the 1997 census were assigned to the mail stratum. On an annual basis, the mail stratum is supplemented with larger, newly active single-location companies identified from a list provided by the Internal Revenue Service (IRS) and new manufacturing locations of multiunit companies identified from the Census Bureau's Company Organization Survey (COS).

For the 1999 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1997 census. Supplemental samples representing both 1998 and 1999 births (newly active establishments that were not included in the 1997 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 2003.

The 1999-2003 ASM sample design is similar to the one used since 1984. Companies in the 1997 Economic Census — Manufacturing with manufacturing shipments of at least \$500 million were defined as company certainties. For these large companies, each manufacturing establishment is included in the mail sample. For the 1999-2003 sample, there are approximately 500 certainty companies collectively accounting for over 18,000 establishments.

For the remaining portion of the mail component of the survey, the establishment was defined as the sample unit. All establishments with 250 employees or more were defined as employment certainties. Across these arbitrary certainty classes, there were approximately 25,000 establishments included in the sample with certainty. Collectively, these certainty establishments accounted for approximately 80 percent of the total value of shipments in the 1997 Economic Census — Manufacturing.

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1997 industry classification and its 1997 product class data. For each product class (1,755) and six-digit industry (473), a desired reliability constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints, while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

This method of assigning probabilities based on product class shipments is motivated by the Census Bureau's primary desire to produce reliable estimates of both product class and industry shipments. The high correlation between shipments and employment, value-added, and other general statistics assures that these variables will also be well represented by the sample. The actual sample selection procedure uses an independent chance of selection method (Poisson sampling) that permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

2. Nonmail stratum. The initial nonmail component of the survey was comprised of approximately 170,000 small, single-establishment companies that were tabulated as administrative records in the 1997 Economic Census — Manufacturing. The nonmail stratum is also supplemented annually using the list of newly active single-location companies provided by the Internal Revenue Service (IRS) and payroll cutoffs. Companies with payroll below the payroll cutoff are added to the nonmail stratum. For this portion of the population, sampling is not used. The data for this group are estimated based on selected information obtained annually from the administrative records of the IRS and Social Security Administration (SSA). This administrative information, which includes payroll, total employment, industry classification, and physical location, is obtained under conditions which safeguard the confidentiality of both tax and census records.

## **RELIABILITY OF DATA**

All data compiled in the economic census are subject to nonsampling errors. Nonsampling errors can be attributed to many sources during the development or execution of the census. The following are two ways that further explain this method: ASM Estimating Procedure. Most of the ASM

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estimates derived for the mail stratum are computed using a difference estimator. At the establishment level, there is a strong correlation between the current-year data values and the corresponding 1997 (base) data values. Therefore, within the mailed stratum, for each item at each level of aggregation, an estimate of the “difference” between the current year and the base year is computed from sample cases and added to the corresponding base-year values. For the 1998-2002 ASM estimates, the 1997 Economic Census — Manufacturing values serve as the base year. For the 2003 ASM, the base will be updated to be the 2002 Economic Census — Manufacturing.

Due to the positive year-to-year correlation, estimates derived using this methodology are generally more reliable than comparable estimates developed from the current sample data alone. Estimates for the capital expenditures variables are not generated using the difference estimator because the year-to-year correlations are considerably weaker. The standard linear estimator is used for these variables.

For the nonmail stratum, estimates for payroll and employment are directly tabulated from the administrative-record data provided by IRS and SSA. Estimates of data other than payroll and employment are developed from industry averages. Although the nonmail stratum contained approximately 170,000 individual establishments in 1999, it accounts for less than 2 percent of the estimate for total value of shipments at the total manufacturing level.

Corresponding estimates for the mail and nonmail components are combined to produce the estimates included in this publication. ASM Data Qualifications. The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sample lists, but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the ASM is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected ASM statistics in this report. They are represented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, complete-coverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

- From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
- From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.
- From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

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For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

#### **DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS**

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

#### **VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS**

The 2002 Economic Census — Manufacturing shows value of shipments data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment.

#### **DISCLOSURE**

In accordance with federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments in a specific industry or geographic area is not considered a disclosure; therefore, this information may be released even though other information is withheld. Techniques employed to limit disclosure are discussed at [www.census.gov/epcd/ec02/disclosure.htm](http://www.census.gov/epcd/ec02/disclosure.htm).

The disclosure analysis for the industry statistics files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. Nonetheless, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures, which can be suppressed even though value of shipments data are published.

# Appendix D. Geographic Notes

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Not applicable for this report.

# Appendix E. Metropolitan Areas and Micropolitan Statistical Areas

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Not applicable for this report.

# Appendix F. Comparability of Product Classes and Product Codes: 2002 to 1997

2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published
3251101.....	3251101.....	3251101.....	325188D.....	325188D.....	325188D.....	3252111.....	3252111.....	3252111.....
3251101111.....	3251101111.....	3251101111.....	325188D100.....	325188D100.....	325188D000.....	3252111110.....	3252111110.....	3252111100 pt
3251101121.....	3251101121.....	3251101121.....	325188H.....	325188G pt.....	325188G pt.....	3252111120.....	3252111120.....	3252111100 pt
3251101YWV.....	3251101YWV.....	3251101YWV.....	325188H120.....	325188G120.....	325188G000 pt.....	3252111130.....	3252111130.....	3252111100 pt
3251104.....	3251104.....	3251104.....	325188H130.....	325188G130.....	325188G000 pt.....	3252111140.....	3252111140.....	3252111100 pt
3251104111.....	3251104111.....	3251104111.....	325188HYWV.....	325188GYWV.....	325188G000 pt.....	3252111150.....	3252111150.....	3252111100 pt
3251104121.....	3251104121.....	3251104121.....	325188W.....	325188W pt.....	325188W pt.....	3252111160.....	3252111160.....	3252111100 pt
3251104YWV.....	3251104YWV.....	3251104YWV.....	325188WYWV.....	325188WYWV pt.....	325188WYWV pt.....	3252111YWV.....	3252111YWV.....	3252111100 pt
325110W.....	325110W.....	325110W.....	325188WYWV.....	325188WYWV pt.....	325188WYWV pt.....	3252114.....	3252114.....	3252114.....
325110WYWV.....	325110WYWV.....	325110WYWV.....	325188WYWW.....	325188WYWW pt.....	325188WYWW pt.....	3252114110.....	3252114110.....	3252114100 pt
325110WYWW.....	325110WYWW.....	325110WYWW.....	325188WYWY.....	325188WYWY pt.....	325188WYWY pt.....	3252114120.....	3252114120.....	3252114100 pt
325110WYWY.....	325110WYWY.....	325110WYWY.....	3251910.....	3251910.....	3251910.....	3252114130.....	3252114130.....	3252114100 pt
3251201.....	3251201.....	3251201.....	32519101011.....	32519101011.....	325191011.....	3252114140.....	3252114140.....	3252114100 pt
3251201100.....	3251201100.....	3251201000.....	32519101021.....	32519101021.....	3251910121.....	3252114150.....	3252114150.....	3252114100 pt
3251204.....	3251204.....	3251204.....	32519102031.....	32519102031.....	3251910231.....	3252114YWV.....	3252114YWV.....	3252114100 pt
3251204100.....	3251204100.....	3251204000.....	3251910241.....	3251910241.....	3251910241.....	325211W.....	325211W.....	325211W.....
3251207.....	3251207.....	3251207.....	3251910291.....	3251910291.....	3251910291.....	325211WYWV.....	325211WYWV.....	325211WYWV.....
3251207100.....	3251207100.....	3251207000.....	3251910291.....	3251910291.....	3251910291.....	325211WYWW.....	325211WYWW.....	325211WYWW.....
325120A.....	325120A.....	325120A.....	3251910YWW.....	3251910YWW.....	3251910YWW.....	325211WYWW.....	325211WYWW.....	325211WYWW.....
325120A100.....	325120A100.....	325120A000.....	3251910YWY.....	3251910YWY.....	3251910YWY.....	3252120.....	3252120.....	3252120.....
325120C.....	325120C.....	325120C.....	3251921.....	3251921.....	3251921.....	3252120111.....	3252120111.....	3252120111.....
325120C100.....	325120C100.....	325120C000.....	3251921100.....	3251921100.....	3251921100.....	3252120211.....	3252120211.....	3252120211.....
325120G.....	325120G.....	325120G.....	3251924.....	3251924.....	3251924.....	3252120311.....	3252120311.....	3252120311.....
325120G100.....	325120G100.....	325120G000.....	3251924100.....	3251924100.....	3251924100.....	3252120321.....	3252120321.....	3252120321.....
325120U.....	325120U.....	325120U.....	325192W.....	325192W.....	325192W.....	3252120411.....	3252120411.....	3252120411.....
325120U100.....	325120U100.....	325120U000.....	325192WYWV.....	325192WYWV.....	325192WYWV.....	3252120511.....	3252120511.....	3252120511.....
325120W.....	325120W.....	325120W.....	325192WYWW.....	325192WYWW.....	325192WYWW.....	3252120611.....	3252120611.....	3252120611.....
325120WYWV.....	325120WYWV.....	325120WYWV.....	325192WYWY.....	325192WYWY.....	325192WYWY.....	3252120711.....	3252120711.....	3252120711.....
325120WYWY.....	325120WYWY.....	325120WYWY.....	3251930.....	3251930.....	3251930.....	3252120811.....	3252120811.....	3252120811.....
3251311.....	3251311.....	3251311.....	325193011.....	325193011.....	325193011.....	3252120811.....	3252120811.....	3252120811.....
3251311100.....	3251311100.....	3251311000.....	3251930211.....	3251930211.....	3251930211.....	3252120YWW.....	3252120YWW.....	3252120YWW.....
3251314.....	3251314.....	3251314.....	3251930221.....	3251930221.....	3251930221.....	3252120YWV.....	3252120YWV.....	3252120YWV.....
3251314111.....	3251314111.....	3251314111.....	3251930311.....	3251930311.....	3251930311.....	3252210.....	3252210.....	3252210.....
3251314121.....	3251314121.....	3251314121.....	3251930311.....	3251930311.....	3251930311.....	3252210131.....	3252210131.....	3252210131.....
3251314131.....	3251314131.....	3251314131.....	3251930411.....	3251930411.....	3251930411.....	3252210139 pt.....	3252210139 pt.....	3252210111.....
3251314YWV.....	3251314YWV.....	3251314YWV.....	3251930511.....	3251930511.....	3251930511.....	3252210139 pt.....	3252210139 pt.....	3252210121.....
3251317.....	3251317.....	3251317.....	3251930YWW.....	3251930YWW.....	3251930YWW.....	3252210141.....	3252210141.....	3252210141.....
3251317110.....	3251317110.....	3251317110.....	3251930YWV.....	3251930YWV.....	3251930YWV.....	3252210YWV.....	3252210YWV.....	3252210YWV.....
3251317211.....	3251317211.....	3251317211.....	3251991.....	3251991.....	3251991.....	3252210YWV.....	3252210YWV.....	3252210YWV.....
3251317311.....	3251317311.....	3251317311.....	3251991111.....	3251991111.....	3251991111.....	3252210YWV.....	3252210YWV.....	3252210YWV.....
3251317321.....	3251317321.....	3251317321.....	3251991121.....	3251991121.....	3251991121.....	3252210YWW.....	3252210YWW.....	3252210YWW.....
3251317331.....	3251317331.....	3251317331.....	3251991131.....	3251991131.....	3251991131.....	3252221.....	3252221.....	3252221.....
3251317YWV.....	3251317YWV.....	3251317YWV.....	3251991141.....	3251991141.....	3251991141.....	3252221111.....	3252221111.....	3252221111.....
325131W.....	325131W.....	325131W.....	3251991151.....	3251991151.....	3251991151.....	3252221121.....	3252221121.....	3252221121.....
325131WYWV.....	325131WYWV.....	325131WYWV.....	3251991161.....	3251991161.....	3251991161.....	3252221131.....	3252221131.....	3252221131.....
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325131WYWY.....	325131WYWY.....	325131WYWY.....	3251991181.....	3251991181.....	3251991181.....	3252221145 pt.....	3252221145 pt.....	3252221151.....
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3251321100.....	3251321100.....	3251321100.....	3251994.....	3251994.....	3251994.....	3252221YWW.....	3252221YWW.....	3252221YWW.....
3251324.....	3251324.....	3251324.....	3251994100.....	3251994100.....	3251994100.....	3252224.....	3252224.....	3252224.....
3251324100.....	3251324100.....	3251324100.....	3251997.....	3251997.....	3251997.....	3252224111.....	3252224111.....	3252224111.....
325132W.....	325132W.....	325132W.....	3251997100.....	3251997100.....	3251997100.....	3252224125 pt.....	3252224125 pt.....	3252224121.....
325132WYWV.....	325132WYWV.....	325132WYWV.....	325199A.....	325199A.....	325199A.....	3252224125 pt.....	3252224125 pt.....	3252224131.....
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3251811100.....	3251811100.....	3251811000.....	325199E121.....	325199E121.....	325199E121.....	3252227.....	3252227.....	3252227.....
3251814.....	3251814.....	3251814.....	325199EYWV.....	325199EYWV.....	325199EYWV.....	3252227111.....	3252227111.....	3252227111.....
3251814100.....	3251814100.....	3251814000.....	325199G.....	325199G.....	325199G.....	3252227211.....	3252227211.....	3252227211.....
3251817.....	3251817.....	3251817.....	325199G110.....	325199G110.....	325199G110.....	3252227311.....	3252227311.....	3252227311.....
3251817100.....	3251817100.....	3251817000.....	325199G120.....	325199G120.....	325199G120.....	3252227411.....	3252227411.....	3252227411.....
325181W.....	325181W.....	325181W.....	325199G130.....	325199G130.....	325199G130.....	3252227421.....	3252227421.....	3252227421.....
325181WYWV.....	325181WYWV.....	325181WYWV.....	325199G140.....	325199G140.....	325199G140.....	3252227YWV.....	3252227YWV.....	3252227YWV.....
325181WYWY.....	325181WYWY.....	325181WYWY.....	325199G210.....	325199G210.....	325199G210.....	325222A.....	325222A.....	325222A.....
3251820.....	3251820.....	3251820.....	325199GYWV.....	325199GYWV.....	325199GYWV.....	325222A115 pt.....	325222A115 pt.....	325222A111.....
3251820100.....	3251820100.....	3251820100.....	325199H.....	325199H.....	325199H.....	325222A115 pt.....	325222A115 pt.....	325222A121.....
3251820YWV.....	3251820YWV.....	3251820YWV.....	325199H111.....	325199H111.....	325199H111.....	325222A131.....	325222A131.....	325222A131.....
3251820YWY.....	3251820YWY.....	3251820YWY.....	325199H121.....	325199H121.....	325199H121.....	325222AYWV.....	325222AYWV.....	325222AYWV.....
3251881.....	3251881.....	3251881.....	325199H131.....	325199H131.....	325199H131.....	325222D.....	325222D.....	325222D.....
3251881100.....	3251881100.....	3251881000.....	325199H141.....	325199H141.....	325199H141.....	325222D111.....	325222D111.....	325222D111.....
3251884.....	3251884.....	3251884.....	325199H151.....	325199H151.....	325199H151.....	325222D211.....	325222D211.....	325222D211.....
3251884100.....	3251884100.....	3251884000.....	325199HYWV.....	325199HYWV.....	325199HYWV.....	325222D221.....	325222D221.....	325222D221.....
3251887.....	3251887.....	3251887.....	325199K.....	325199K.....	325199K.....	325222D231.....	325222D231.....	325222D231.....
3251887100.....	3251887100.....	3251887000.....	325199K100.....	325199K100.....	325199K100.....	325222DYWV.....	325222DYWV.....	325222DYWV.....
325188A.....	325188A.....	325188A.....	325199N.....	325199N.....	325199N.....	325222W.....	325222W.....	325222W.....
325188A100.....	325188A100.....	325188A000.....	325199N100.....	325199N100.....	325199N100.....	325222WYWV.....	325222WYWV.....	325222WYWV.....
			325199T.....	325199T.....	325199T.....	325222WYWY.....	325222WYWY.....	325222WYWY.....
			325199T100.....	325199T100.....	325199T100.....	3253111.....	3253111.....	3253111.....
			325199V.....	325199V.....	325199V.....	3253111100.....	3253111100.....	3253111100.....
			325199V100.....	325199V100.....	325199V100.....	3253114.....	3253114.....	3253114.....
			325199W.....	325199W.....	325199W.....	3253114100.....	3253114100.....	3253114100.....
			325199W100.....	325199W100.....	325199W100.....	3253117.....	3253117.....	3253117.....
			325199W100.....	325199W100.....	325199W100.....	3253117100.....	3253117100.....	3253117100.....
			325199W100.....	325199W100.....	325199W100.....	325311W.....	325311W.....	325311W.....
			325199W100.....	325199W100.....	325199W100.....	325311WYWV.....	325311WYWV.....	325311WYWV.....
			325199W100.....	325199W100.....	325199W100.....	325311WYWW.....	325311WYWW.....	325311WYWW.....
			325199W100.....	325199W100.....	325199W100.....	325311WYWY.....	325311WYWY.....	325311WYWY.....

2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published	2002 published	2002 collected	1997 published
325312	3253121	3253121	3254127	3254127	3254127	32552046C1	32552046C1	32552046C1
325312100	3253121100	3253121000	3254127100	3254127100	3254127000	32552046F1	32552046F1	32552046F1
3253124	3253124	3253124	325412A	325412A	325412A	32552046G1	32552046G1	32552046G1
3253124100	3253124100	3253124000	325412A100	325412A100	325412A000	32552046H1	32552046H1	32552046H1
3253127	3253127	3253127	325412D	325412D	325412D	3255204YVW	3255204YVW	3255204YVW
3253127111	3253127111	3253127111	325412D100	325412D100	325412D000	3255207	3255207	3255207
3253127121	3253127121	3253127121	325412G	325412G	325412G	3255207111	3255207111	3255207111
3253127131	3253127131	3253127131	325412G100	325412G100	325412G000	3255207121	3255207121	3255207121
3253127141	3253127141	3253127141	325412L	325412L	325412L	3255207131	3255207131	3255207131
3253127YVW	3253127YVW	3253127YVW	325412L100	325412L100	325412L000	3255207YVW	3255207YVW	3255207YVW
325312W	325312W	325312W	325412P	325412P	325412P	325520A	325520A	325520A
325312WYVW	325312WYVW	325312WYVW	325412P100	325412P100	325412P000	325520A111	325520A111	325520A111
325312WYVY	325312WYVY	325312WYVY	325412T	325412T	325412T	325520A121	325520A121	325520A121
3253140	3253140	3253140	325412T100	325412T100	325412T000	325520A131	325520A131	325520A131
3253140111	3253140111	3253140111	325412V	325412V	325412V	325520A141	325520A141	325520A141
3253140121	3253140121	3253140121	325412V111	325412V111	325412V111	325520A151	325520A151	325520A151
3253140131	3253140131	3253140131	325412V121	325412V121	325412V121	325520AYVW	325520AYVW	325520AYVW
3253140141	3253140141	3253140141	325412V191	325412V191	325412V191	325520W	325520W	325520W
3253140151	3253140151	3253140151	325412VYVW	325412VYVW	325412VYVW	325520WYVW	325520WYVW	325520WYVW
3253140161	3253140161	3253140161	325412W	325412W	325412W	325520WYVY	325520WYVY	325520WYVY
3253140241	3253140241	3253140241	325412WYVW	325412WYVW	325412WYVW	3256111	3256111	3256111
3253140YVW	3253140YVW	3253140YVW	325412WYVY	325412WYVY	325412WYVY	3256111111	3256111111	3256111111
3253140YVY	3253140YVY	3253140YVY	3254130	3254130	3254130	3256111121	3256111121	3256111121
3253201	3253201	3253201	32541301011	32541301011	3254130111	3256111131	3256111131	3256111131
3253201111	3253201111	3253201111	3254130221	3254130221	3254130221	3256111211	3256111211	3256111211
3253201413	3253201413	3253201413	3254130331	3254130331	3254130331	3256111221	3256111221	3256111221
3253201725	3253201725	3253201725	3254130341	3254130341	3254130341	3256111311	3256111311	3256111311
3253201A15	3253201A15	3253201A15	3254130351	3254130351	3254130351	3256111321	3256111321	3256111321
3253201A17	3253201A17	3253201A17	3254130461	3254130461	3254130461	3256111411	3256111411	3256111411
3253201A21	3253201A21	3253201A21	3254130571	3254130571	3254130571	3256111511	3256111511	3256111511
3253201A23	3253201A23	3253201A23	3254130691	3254130691	3254130691	3256111611	3256111611	3256111611
3253201A27	3253201A27	3253201A27	3254130YVW	3254130YVW	3254130YVW	3256111711	3256111711	3256111711
3253201A29	3253201A29	3253201A29	3254130YVY	3254130YVY	3254130YVY	3256111721	3256111721	3256111721
3253201A41	3253201A41	3253201A41	3254141	3254141	3254141	3256111731	3256111731	3256111731
3253201A43	3253201A43	3253201A43	3254141111	3254141111	3254141111	3256111741	3256111741	3256111741
3253201A44	3253201A44	3253201A44	3254141121	3254141121	3254141121	3256111YVW	3256111YVW	3256111YVW
3253201A45	3253201A45	3253201A45	3254141YVW	3254141YVW	3254141YVW	3256114	3256114	3256114
3253201A47	3253201A47	3253201A47	3254144	3254144	3254144	3256114111	3256114111	3256114111
3253201D31	3253201D31	3253201D31	3254144100	3254144100	3254144100	3256114121	3256114121	3256114121
3253201D33	3253201D33	3253201D33	3254147	3254147	3254147	32561141211	32561141211	32561141211
3253201YVW	3253201YVW	3253201YVW	3254147111	3254147111	3254147111	3256114131	3256114131	3256114131
3253204	3253204	3253204	3254147121	3254147121	3254147121	3256114141	3256114141	3256114141
3253204111	3253204111	3253204111	3254147YVW	3254147YVW	3254147YVW	3256114511	3256114511	3256114511
3253204113	3253204113	3253204113	325414A pt	325414A pt	325414A	3256114521	3256114521	3256114521
3253204115	3253204115	3253204115	325414A pt	325414A pt	325414A pt	3256114531	3256114531	3256114531
3253204117	3253204117	3253204117	325414A111	325414A111	325414A111	3256114541	3256114541	3256114541
3253204121	3253204121	3253204121	325414A121	325414A121	325414A121	3256114551	3256114551	3256114551
3253204123	3253204123	3253204123	325414A131	325414A131	325414A131	3256114561	3256114561	3256114561
3253204125	3253204125	3253204125	325414A241	325414A241	325414A241	3256114571	3256114571	3256114571
3253204127	3253204127	3253204127	325414A311	325414A311	325414A311	3256114581	3256114581	3256114581
3253204129	3253204129	3253204129	325414A311	325414A311	325414A311	3256114591	3256114591	3256114591
3253204139	3253204139	3253204139	325414A311	325414A311	325414A311	3256114YVW	3256114YVW	3256114YVW
3253204133	3253204133	3253204133	325414W	325414W	325414W pt	3256117	3256117	3256117
3253204141	3253204141	3253204141	325414WYVW	325414WYVW	325414WYVW pt	3256117111	3256117111	3256117111
3253204143	3253204143	3253204143	325414WYVY	325414WYVY	325414WYVY pt	3256117211	3256117211	3256117211
3253204145	3253204145	3253204145	3255101	3255101	3255101	3256117311	3256117311	3256117311
3253204147	3253204147	3253204147	3255101100	3255101100	3255101000	3256117321	3256117321	3256117321
3253204YVW	3253204YVW	3253204YVW	3255104	3255104	3255104	3256117331	3256117331	3256117331
3253207	3253207	3253207	3255104100	3255104100	3255104000	3256117341	3256117341	3256117341
3253207111	3253207111	3253207111	3255107	3255107	3255107	3256117YVW	3256117YVW	3256117YVW
3253207113	3253207113	3253207113	3255107100	3255107100	3255107000	325611A	325611A	325611A
3253207121	3253207121	3253207121	325510B pt	325998H pt	325998H pt	325611A111	325611A111	325611A111
3253207123	3253207123	3253207123	325510B100 pt	325510B100 pt	325510A000	325611A121	325611A121	325611A121
3253207125	3253207125	3253207125	325510B100 pt	325998H1J1	325998H1E1 pt	325611AYVW	325611AYVW	325611AYVW
3253207131	3253207131	3253207131	325510W pt	325510W	325510W	325611D	325611D	325611D
3253207133	3253207133	3253207133	325510W pt	325998H pt	325998H pt	325611D100	325611D100	325611D100
3253207135	3253207135	3253207135	325510W pt	325998H pt	325998H pt	325611W	325611W	325611W
3253207137	3253207137	3253207137	325510W pt	325998H pt	325998H pt	325611WYVW	325611WYVW	325611WYVW
3253207141	3253207141	3253207141	325510W pt	325998W pt	325998W pt	325611WYVY	325611WYVY	325611WYVY
3253207143	3253207143	3253207143	325510WYVW pt	325510WYVW	325510WYVW	3256121	3256121	3256121
3253207145	3253207145	3253207145	325510WYVW pt	325510WYVW	325510WYVW	3256121111	3256121111	3256121111
3253207151	3253207151	3253207151	325510WYVW pt	325510WYVW	325510WYVW	3256121121	3256121121	3256121121
3253207155	3253207155	3253207155	325510WYVY pt	325510WYVY	325510WYVY	3256121131	3256121131	3256121131
3253207157	3253207157	3253207157	325510WYVY pt	325510WYVY	325510WYVY	3256121141	3256121141	3256121141
3253207159	3253207159	3253207159	325510WYVY pt	325510WYVY	325510WYVY	3256121YVW	3256121YVW	3256121YVW
3253207YVW	3253207YVW	3253207YVW	3255201	3255201	3255201	3256125	3256125	3256125
325320W	325320W	325320W	3255201111	3255201111	3255201111	3256125111	3256125111	3256125111
325320WYVW	325320WYVW	325320WYVW	3255201121	3255201121	3255201121	3256125211	3256125211	3256125211
325320WYVY	325320WYVY	325320WYVY	3255201131	3255201131	3255201131	3256125221	3256125221	3256125221
3254111	3254111	3254111	3255201141	3255201141	3255201141	3256125231	3256125231	3256125231
3254111111	3254111111	3254111111	3255201151	3255201151	3255201151	3256125241	3256125241	3256125241
3254111221	3254111221	3254111221	3255201161	3255201161	3255201161	3256125251	3256125251	3256125251
3254111YVW	3254111YVW	3254111YVW	3255201YVW	3255201YVW	3255201YVW	3256125261	3256125261	3256125261
3254114	3254114	3254114	3255204	3255204	3255204	325612531		





